

## **Summary**

Since Hungary's NATO accession, the Hungarian Defence Forces have been actively involved in international peacekeeping operations, such as the missions in Iraq or Afghanistan. Unfortunately, bombing attacks in the theatres of operations proved to be almost daily events, with very frequent cases of fatalities or serious injuries. Organizations focusing on the analysis of acts of terrorism have indicated that not only military but civilian targets (buildings and persons) are also in the crosshairs of terrorism. In this sector, critical systems and facilities for holding masses of people are the most prevalent with extremely high numbers of cases. The most significant reason for this is that civilian facilities comprise an easy target for attackers. The protection of such amenities requires the establishment of a particularly complex system which is extremely costly if the remaining risk level is to be minimized or to be limited to an acceptable level. Unfortunately, in the vast majority of cases the persons responsible for security are not in control even of the basic factors of the otherwise complex system.

Critical systems contribute to creating public security and that of the country's external security therefore if this infrastructure – which is otherwise indispensable for the functioning of society – is damaged, it may have unforeseeable consequences at even national level.

A bomb attack, which may happen in a busy street of any city, may result in a great number of human lives and large-scale material damage.

Also on the basis of the research history, the dissertation deals with the shortcomings of the mentioned areas, their interconnections, and resolution of these issues.

## **New scientific findings**

1. I established new definitions, a new categorisation, and a security approach to defending the general, priority and critical objects of the domestic man-made environment, and the protection opportunities of military compounds against (terrorist) attacks.

- object categorisation and definition: general, priority, critical / vital.
- traffic control device and other regulations;
- defence plan concept;
- guarded, unguarded conditions;
- protection techniques.

2. I introduced both attack and defence axioms on the basis of the analysis of attack and defence methods, and made suggestions both for attack and defence on the basis of these axioms.
3. I compiled a partial design manual that may facilitate civilian, law-enforcement, and defence organizations to plan defence and protection against vehicle-borne attacks.
4. I was the first to develop a complete decision-support mapping system, which may be used for the damage assessment of bombing attacks, for determining the human resources and technical assets of defence, law-enforcement, and civil-defence organizations, and for coordinating their activities in connection with detection, prevention, remediation, and damage elimination processes.